A photograph of a camel caravan in a desert canyon. The scene is set in a rugged, arid landscape with steep, layered rock formations in shades of orange, red, and tan. In the middle ground, a line of camels is being led by herders across a sandy ridge. The lighting suggests late afternoon or early morning, with long shadows and warm, golden light illuminating the scene. The overall atmosphere is one of a traditional, nomadic lifestyle in a harsh environment.

Current conditions of camel herders in Mongolia and their adaptation to the climate change

Khand BYAMBAA,
Camel herder,
Mongolia



Personal overview

Daughter of a hereditary nomadic family

Learned riding horse at the age of 5 and riding camel at the age of 8;

Learned the traditional methods of animal husbandry from my ancestors – one of the best herders in Mongolia.

15 years as a herder and 7 year as a “CAMEL” herder

Hobbies: take animal photography, and experiment with making new camel milk products.

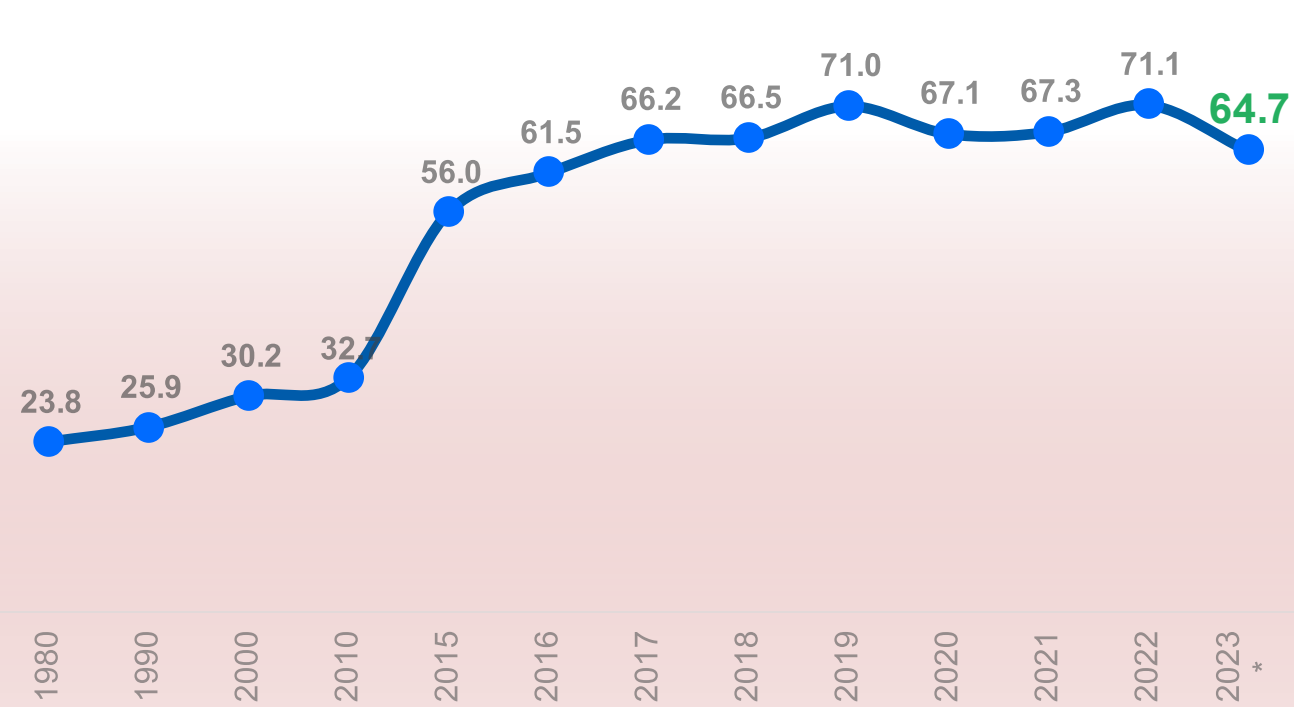
Most importantly, an eco friendly herder



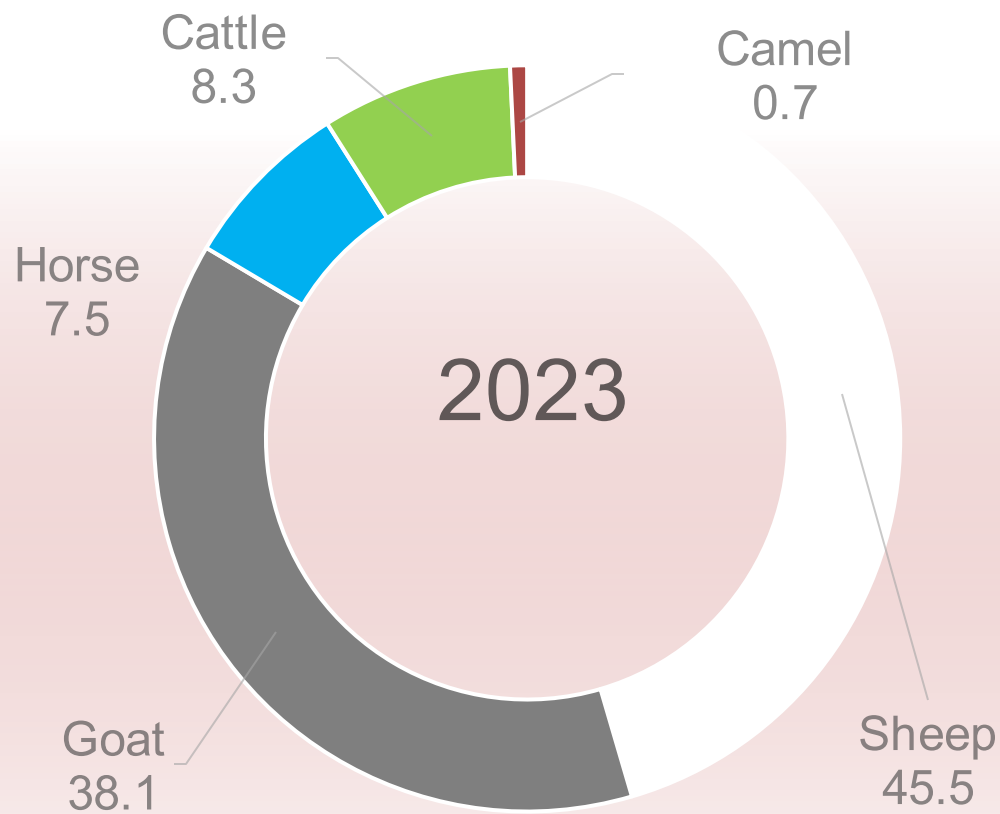


Livestock information of the Mongolia

There are 64.7 million livestock of cattle in the state.



5 different type of livestock





Winter camp



Spring camp



Summer camp



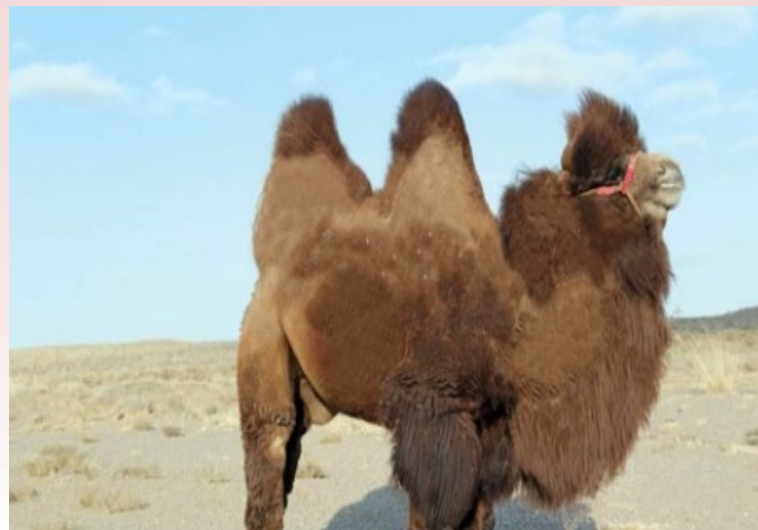
Autumn camp

There are 4 camel breeds and 2 strains in our country



Breeds

1. Galbyn govin ulaan
2. Tukhum tungalagiin khuren
3. Khanyn khetsiin khuren
4. Mongolian national breed



Strains

1. Brown Oldokh
2. Lamyn Gegeenii ulaan

Features of Oldokh strain camel

- There was a monastery with more than 300 monks. There has been a history of being honored as the "flock of God."
- The bagh of Oldokh now has about 7,000 camels, and more than 50 herders continue to breed this brown camel.

Strain of brown camel Oldokh

- Camel with brown wool;
- Genetically, it's different from other breeds and reproductive camels,
- Ability to use pasture is high,
- There's no defect in the body shape,
- Professionals define it as a flock suitable for breeding for meat and wool.



Why did we decide to herd camels only?



- Spent difficult years on transhumance recent years searching for grass for horses, goats and sheep leaving the camels;
- Years of thought that pasture should be protected /Desertification and pasture degradation, scarcity of drinking water/
- In 2017 sudden decision of my husband to sell most animals except camels;
- Went back home, gathered the camels and settled in an abandoned place.
- Thus, we started a life of a truly camel herders.



Benefits of camel herding only

- Sufficient to choose pastures suitable for camels only;
- A camel herder can look after every single camel;
- Camel herders enjoy the full benefits of their camels (dairy products, camel wool, meat);
- Reduced stress because only camel herding is easier;
- Reduced risk of losing livelihood (camels are more resistant natural risks such as cold blizzard, sandstorms, droughts etc.);
- Economic benefits all around year (dairy product selling in winter and spring, wool selling in summer, meat selling in autumn and spring)
- Time saving and a little free time.
- Most importantly, herding animals that have least ecological footprint, made us eco-friendly herder.

Camel products

- Meat
- Milk
- Buuriin bokhi
- Borts
- Dung
- Hide





Camel milk products

- It will be milked once a day in summer and autumn, and twice in winter.
- More than 10 types of dairy products are made: dried curd, fresh curd, fermented milk, milk, fresh cream, oil extracted from milk cream (shar tos), curd from stored cream (tsagaan tos), vodka, desert of cream mixed with flour and berries.
- 1 kg of curd is made from 10-12 liters of fermented camel milk.
- Fermented camel milk is the best immune booster in winter. Thus, it is most demanded product, and the price rises accordingly.
- Prices range from **2\$-5\$** dollars.

How is milk processed?



Milk alcohol is produced through distillation of fermented milk. The process allows also the preparation of curd. Once the boiled fermented milk is cooled down, the whey is extracted with the help of cotton sack. The fresh curd is pressed overnight and cut in small rectangles to be dried in open air on a flat wooden tray. Camel curd is soft and rich in fat. Camel milk alcohol is not strong in taste but strong in acting.

CAMEL WOOL, CAMEL WOOL PRODUCTS, THEIR FEATURES



- The camel wool has a solid, warm separation, good air exchange, antistatic or non-electric features and a luxurious sheet. Because it contains high-quality lanoline, it has features that improve blood flow.
- The camel's wool output varies from **2.6** to **8.1** kg, depending on age and gender.
- In recent years, the price of 1 kg raw wool ranges from **\$3-5 (U.S.)**. It can be used for a variety of threads, wires, tablecloths, and homemade utensils. Production of camel wool products continues to increase.
- Camel wool is collected from March to July.

Mongolians have the best meat drying technology.



- One way to preserve camel meat for long periods of time is to make jerkies.
- Very interesting sources indicate that jerky was the main food of the Genghis Khan's army.
- As soon as the meat starts to freeze in December, the spruce will be prepared. This has to do with the absorption of meat juice into its meat. The meat is separated from the bones, cut in small cubes, and placed in a square cloth bag and dried in the air.
- 1 kg of meat makes about 200 grams of jerky.
- Jerky is a wonderful food made and used in Mongolia from antiquity. It could be said that products made with this kind of technology are not available in another country in the world.

Current conditions of Mongolian camel herders

- ♦ Rain scarce and scarce in the Gobi and people and animals are surviving with one time rain only;
- ♦ Mining activities in the Gobi are exhausting all soil water resources. It intensifies desertification and lack of drinking water;
- ♦ Loss of ecosystem in the Mongolian Gobi. It is extremely hard to grow animals except camels. If it continues like this, it will become impossible for camels to survive either.
- ♦ It obliges herders to give up animal husbandry and search for jobs opportunities in the mining for example.



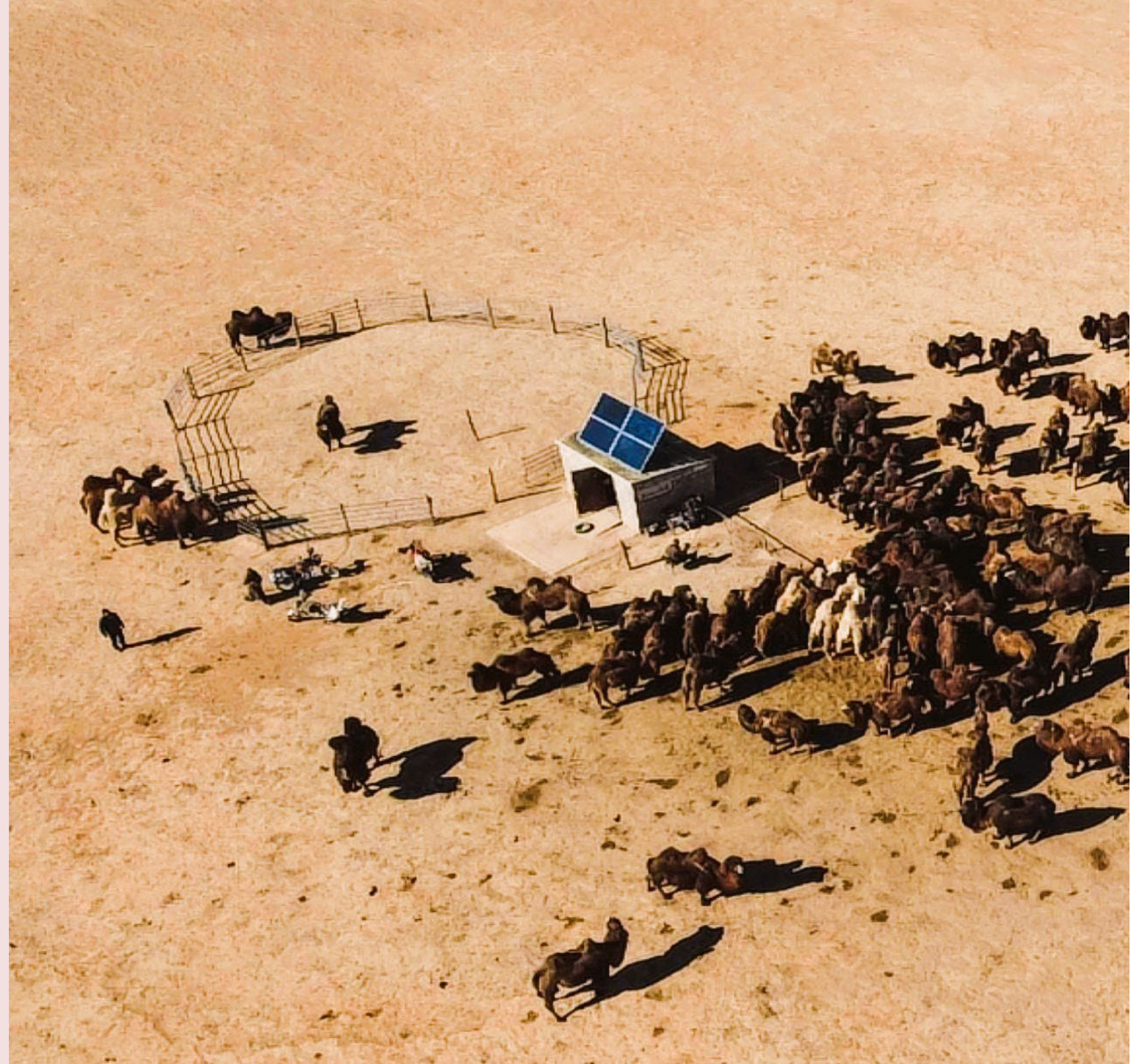
Challenges

- Scarcity of drinking water for camels;
- Natural disasters such as sandstorm droughts;
- Desertification and pasture degradation;
- Poor livelihood due to the lack of value chain and organized sales mechanism (high cost for frequent transhumance, water transportation, low cost of raw materials such as skin, wool and meat)



Water condition

Umnugovi province is rich in natural resources, such as copper, gold, and coal. As a result, the mines are thriving. In these places, the use of groundwater is increasing in connection with the acceleration of mining production. As a result, many hand wells were washed away without water. In our province, animal water supplies are essentially underground water. Sources report that there are more than 300 engineered wells in the province, but it is alarming that water shortages continue to increase noticeably year after year. As water is increasingly used in the mining industry, people live on a daily basis with the fear of dehydration.



How many times a year do we move

- In 2021, we moved the most passing through the territory of 3 different soums over 400 kilometers.
- In 2023, the rains were as late as before. We moved the fewest times. We chose 5 optimal positions. And then went back to the winter camp.
- Herders who herd five different types of animal in Gobi, need to move at least ten times. But the situations vary depending on the herder families.





➤ Dwelling: Yurt and trailer home

Nomadic Mongolians live in Mongolian yurt made of felt and wood. it is perfect for moving. Previously they moved only in the warm season. But in recent years, it has been moving in winter without summer and they used a trailer home. So every nomadic family on Gobi lives in a trailer. it is easier than building traditional yurt.

Action plan for 2021-2023 under the long-term development plan of Mongolia “vision - 2050”

Develop agriculture as a leading sector of the economy that is environmentally friendly, adaptable to climate change, resilient, responsive to social development trends, needs and requirements, responsible, highly productive and sustainable.





Government policy for developing camel milk dairy products on cluster

Government efforts to protect camels:

- Camel festival, Camel wool subsidy, Camel milk subsidy, promotion of camel through tourism...
- There is a tax exemption in some provinces and a bonus for baby camels. The selection of the best camel herders ...
- In 2024, expenses for developing camel milk were budgeted in the national budget.
- Improve the packaging and production of camel products (innovative products) and create a value chain in the local and international markets.

About how we herd our camels

- Our biggest concern is the psychology of the camel.
- It's nice to see our camel playing a crow.
- I think my husband is the best camel herder. Because My husband is the best when it comes to land pasture He is also the most outstanding in training the camel. He's brilliant at getting the volume in this way.
- We attract many people because we have tame camel
- We get happy when we see our camels being nice.



**in 2023 best camel
herder in Dundgovi
province**

- Best ever food review show
- Art ger Mongolia



Appeal

If you love the nature and camel, raise camels. I would like to reassure you that the camel is a naturally rotating, resilient, and profitable animal.

To leave the least footprint on mother earth, we chose herd camels over the other animals such as goats which are far more harmful to the environment.

Protecting the mother earth is an important duty of ours regardless of where you live or what you do.

Human, environment and animals are connected by inextricable relationship to each other. We are one home.

Way to protect our home from a place of herders, is to raise camels that are the most environmentally friendly animals.



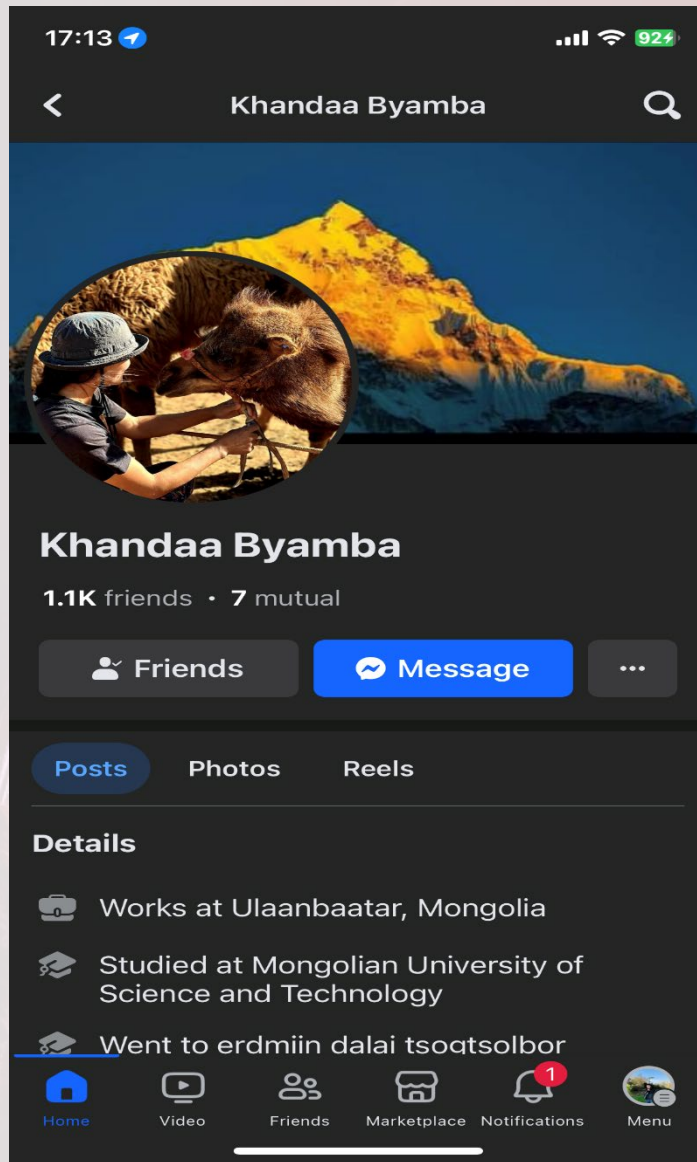
The camel-loving people of the world woke me up from my slumber...

I felt when I met these people that there are many people who love camels in the world. The same now. I have always been dreaming to take action against desertification and protecting camels.

I wish academicians do more research on camels. Especially I want many people with diabetes and autism to be cured by drinking camel milk.

If you want to visit Mongolia, home to the most Bactrian camels in the world, if you want to do research on camels, our door is wide open. I will be your partner. My family will accept your offers gladly.





Thank You!

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